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(54) **LASER POLISHING CERAMIC MATERIAL**

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**ABSTRACT**

Systems and methods for polishing a ceramic component using a laser. The ceramic component may include a planar region that is polished using, for example, a mechanical or chemical mechanical polishing operation to produce a polished face. A contoured region that is adjacent to the planar region may be irradiated using a laser to heat the ceramic material within the contoured region. The irradiation may reduce the surface roughness of the contoured region to produce a polished surface. The ceramic component may be heated prior to being irradiated with the laser to reduce thermal gradients within the ceramic component.

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